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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,055	09/10/2003	Simon John Knee	ASTU-001/01US (017622-201	7300

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EXAMINER	
NANO, SARGON N	

ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,055	KNEE ET AL.	
	Examiner	Art Unit	
	Sargon N. Nano	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5/21/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. This office action is responsive to amendment filed on May 21, 2007. Claims 1, 18 and 29 are amended. Claims 1 – 31 are pending examination.

Priority

2. This application claims the benefit of provisional application 60,419,710 (October 17, 2002).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al. U. S. Patent No. 6,665,725 (referred to hereafter ad Dietz) in view of Schweitzer et al. Pub. No. 2002/0016843 (referred to hereafter as Schweitzer).

As to claim 1, Dietz teaches a method of processing data in a stateful protocol processing system configured to process multiple flows of messages, said method comprising:

receiving a first plurality of messages of a first of said flows, said first of said flows comporting with a first stateful protocol (see col.7 lines 12 – 26 and 41 – 64, Dietz discloses multiple messages of first type that are received by the monitor);

deriving events of at least a first type and a second type from said first plurality of messages (see col.7 lines 12 – 26 and col. 9, lines 9 – 27, Dietz discloses type A and type B messages) ;

assigning a first protocol processing core to process said events of said first type accordance with said first stateful protocol (see col.6 lines 16 – 31 and col. 9 lines 9 – 27, Dietz discloses the use of various protocols for transmitting data through a network); and

assigning a second protocol processing core to process said events of said second type in accordance with said first stateful protocol (see col. 6 lines 16 – 31 and col. 13 lines 5 – 25 Dietz discloses the use of different protocols and application stateful protocols such as TCP/IP).

Dietz teaches various protocols processing for transmitting data through a network. Dietz does not specifically teach the assignment of a protocol from a plurality of protocol processing cores compatible with events of certain type of protocol. However Schweitzer discloses a method and system in which packets of a flow are stored in a queue and examined to determine application associated with a flow according to a protocol (see paragraphs 0034 – 0037). Moreover, packets are initially processed by a filter for performing protocol recognition and then assigned to a packet analyzer. Most importantly, Schweitzer discloses using multiple packets analyzers and assigning flows

to appropriate one of the analyzers based upon the protocol filter criteria (see paragraphs 0034 – 0037). It would have been obvious to one of the ordinary skill in the art the time of invention to combine the teachings of Dietz and Schweitzer to achieve high data rate and faster processing for stateful protocols in transport layer and elsewhere.

As to claim 2, teaches the method of claim 1 further including:

receiving a second plurality of messages of a second of said flows, said second of said flows comporting with a second stateful protocol (see col.7 lines 12 – 26 and 41 – 64); and deriving events of at least a third type and a fourth type from said second plurality of messages (see col.7 lines 12 – 26 and col. 9 lines 9 – 27).

As to claim 3, Dietz and Schweitzer teach the method of claim 2 further including:

assigning a third protocol processing core to process said events of said third type in accordance with said second stateful protocol (see col.7 lines 12 – 26 and 41 – 64) ; and assigning a fourth protocol processing core to process said events of said fourth type in accordance with said second stateful protocol (see col.7 lines 12 – 26 and col. 9 lines 9 – 27) .

As to claim 4, Dietz and Schweitzer teach the method of claim 2 further including:

assigning said first protocol processing core to process said events of said third type in accordance with said second stateful protocol (see col.7 lines 12 – 26 and 41 – 64); and assigning said second protocol processing core to process said events of said fourth

type in accordance with said second stateful protocol (see col.7 lines 12 – 26 and col. 9 lines 9 – 27)

As to claim 5, teaches the method of claim 1 further including: identifying a first plurality of protocol processing cores configured to process said events of said first type (see col. 7 lines 12 – 26 and 41 - 64); and selecting said first protocol processing core from among said first plurality of protocol processing cores (see col.6, lines 16 – 31 and col. 13 lines 5 - 25).

As to claim 6, Dietz and Schweitzer teach the method of claim 5 further including: identifying a second plurality of protocol processing cores configured to process said events of said second type (see col.7 lines 12 – 26 and 41 – 64) and selecting said second protocol processing core from among said second plurality of protocol processing cores(see col. 7 lines 12 – 26 and 41 – 64).

As to claim 7, Dietz and Schweitzer teach the method of claim 1 further including: extracting a first flow identification key from said first plurality of messages (see col. 4 lines 28 – 49); generating a first local flow identification proxy based upon said first flow identification key; and retrieving a first flow state characterizing said first of said flows using said first local flow identification proxy(see col. 4 lines 28 – 49).

As to claim 8, Dietz and Schweitzer teach the method of claim 7 further including: extracting a second flow identification key from said second plurality of messages; generating a second local flow identification proxy based upon said second flow identification key; and retrieving a second flow state characterizing said second of said flows using said second local flow identification proxy(see col.9, lines 29 - 60).

As to claim 9, Dietz and Schweitzer teach the method of claim 2 further including:

receiving said first plurality of messages over a first logical channel; defining a first class of events corresponding to at least said events of said first type and said events of said second type; and executing a first event-handling routine applicable to said first class of events (see col.7 lines 12 – 26 , col. 9 lines 9 – 27 and 41 - 64).

As to claim 10, Dietz and Schweitzer teach the method of claim 9 further including:

receiving said second plurality of messages over a second logical channel;

defining a second class of events corresponding to at least said events of said third type and said events of said fourth type; and executing a second event-handling routine applicable to said second class of events(see col. 3 lines 1 – 29).

As to claim 11, Dietz and Schweitzer teach the method of claim 3 further including:

retrieving a first flow state characterizing said first of said flows(see col. 5 lines 45 – 64); partitioning said first flow state into a first workspace portion and a second workspace portion; and assigning said first workspace portion to said first protocol processing core and said second workspace portion to said second protocol processing core(see col. 6 lines 16 – 31 and col. 13 line 5 – 25).

As to claim 12, Dietz and Schweitzer teach the method of claim 11 further including:

retrieving a second flow state characterizing said second of said flows; partitioning said second flow state into a third workspace portion and a fourth workspace portion; and assigning said third workspace portion to said third. protocol processing core and said fourth workspace portion to said fourth protocol processing core(see col. 5 – 25 and col. 6 lines16 – 31).

As to claim 13, Dietz and Schweitzer teach the method of claim 2 further including:

setting a first flow timer associated with said first of said flows; generating a first timeout expiration event upon expiration of said first flow timer (see col. 1 lines 56 – col. 2 line 20); and forwarding said first timeout expiration event to a first selected protocol processing core (see col. 5 lines 45 – 64).

As to claim 14, Dietz and Schweitzer teach the method of claim 13 further including:

setting a second flow timer associated with said second of said flows(see col. 1 lines 56 – col. 2 line 20);

generating a second timeout expiration event upon expiration of said second flow timer; and forwarding said second timeout expiration event to ,a second selected protocol processing core(see col. 1 lines 56 – col. 2 line 20).

As to claim 15, Dietz and Schweitzer teach the method of claim 1 further including:

generating an additional event based upon a current state of said first of said flows; retrieving a current flow state on the basis of said additional event; and assigning a third protocol processing core, different from said first protocol processing core and second protocol processing core, to continue processing said events of said first type and said second type (see col.7 lines 27 – 50 and col. 8 lines 14 – 32).

As to claim 16, Dietz and Schweitzer teach the method of claim 2 further including: establishing a first communication buffer associated with said first of said flows, said first communication buffer being of a first buffer size based upon information within said first plurality of messages (see col. 10 lines 3 – 41); and establishing a second communication buffer associated with said second of said flows, said second communication buffer being of a second buffer size based upon information with said second plurality of messages (see col. 4 lines 28 – 41).

As to claim 17, Dietz and Schweitzer teach the method of claim 16 wherein said first communication buffer is comprised of a predetermined number of pages of equal size wherein one of said pages is allocated in connection with each of a plurality of allocation operations performed during communication of data associated with said first of said flows (see col.10 lines 3 - 41).

Claims 18 – 31 do not teach above and beyond the limitations of claims 1 – 17 and therefore are rejected under the same rationale.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 – 31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 41 of copending Application No. 10,211,434. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 – 41 of Patent Application Number 10,211,434 contains every element of the claims 1 – 31 of the instant application and thus anticipate the claims of the instant application. Claim(s) as such is/are unpatentable over obvious type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by earlier claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Instant application 10/660 055	**Pending Application 10/211,434**
1. A method of processing data in a stateful protocol processing system configured to process multiple flows of messages, said method comprising:	**1. A method of processing data in a stateful protocol processing system ("SPPS") that processes a multiplicity of flows of messages**, each flow being associated with a uniquely corresponding flow identification ("FID") that is conveyed by messages belonging to such flow, the method comprising:
receiving a first plurality of messages of a first of said flows, said first of said flows comporting with a first stateful protocol;	a) **receiving a plurality of messages belonging to a particular flow;**
deriving events of at least a first type and a second type from said first plurality of messages;	b) **deriving SPPS events associated with the particular flow from the received messages**;
assigning a first protocol processing core to process said events of said first type in accordance with said first stateful protocol; and	c) specifically **assigning a first protocol processing core ("PPC") to process one or more events of the particular flow in accordance with a stateful protocol** (SP) of the particular flow; and
assigning a second protocol processing core to process said events of said second type in accordance with said first stateful protocol	d) specifically **assigning a different second PPC to process one or more other events of the particular flow** in accordance with the SP of the particular flow.

Instant application 10/660 055	Pending Application 10/211,434
18. A stateful protocol processing apparatus configured to process multiple flows of messages, said apparatus comprising : an input processing unit disposed to ***receive a first plurality of messages of a first of said flows***, said input processing unit **deriving events of at least a first type and a second type from said first plurality of messages**; **a first protocol processing core**; **a second protocol processing core**; and a dispatcher operative **to assign said first protocol processing core to process said events of said first type in accordance with a first stateful protocol and to assign said second protocol processing core to process said events of said second type in accordance with said first stateful** protocol.	**18**. A method of processing data in a data communication **stateful protocol processing system that processes a multiplicity of flows of data communication messages,** each flow being associated with a uniquely corresponding flow identification ("FID") that is conveyed by messages belonging to such flow, the method comprising: a) ***receiving messages belonging to a particular flow and messages belonging to other flows***; b) **deriving events from the received messages that are associated with the flow indicated by the FID of the message from which they are derived, including events associated with the particular flow and events associated with the other flows;** c) placing each event in one of a group of one or more preliminary processing queues; d) **assigning a first protocol processor core** ("PPC") **to process a first event of the particular flow** without regard to the preliminary processing queue in which the first event is located, and subsequently transferring the first event to a local queue of the assigned first PPC; and e) **assigning a different second PPC to process a different second event of the particular flow** without regard to the preliminary processing queue in which the second event is located, and subsequently transferring the second

	event to a local queue of the assigned second PPC.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure .**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sargon N. Nano whose telephone number is (571) 272-4007. The examiner can normally be reached on 8 hour.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sargon Nano
July 27, 2007

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